IN THE SPECIFICATION

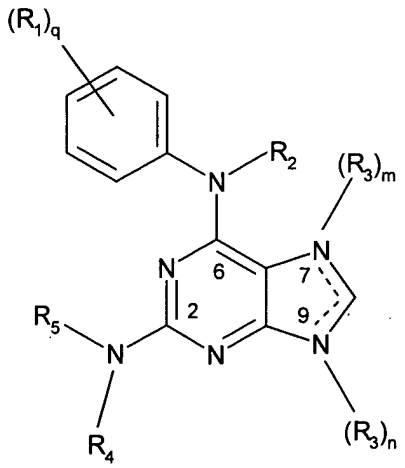
Please replace the paragraph beginning at page 2, lines 1 and ending at page 2, line 2, (2 lines) with the following rewritten paragraph:

--29C atoms, a substituted carbocyclic radical having not more than 29 C atoms or a substituted heterocyclic radical having not more than 20 C atoms and not more than 9 heteroatoms and--

IN THE CLAIMS

Delete Claims 2-4, 6, 14, and 16-19. Add the following Claims 20-28; they are clean renumbered rewritten versions correspond to the Claims being deleted.

Claim 20. A compound of the formula I



(I)

in which q is 1-5,

R_1 is halogen; lower alkyl; hydroxyl; lower alkanoyloxy; lower alkoxy which is unsubstituted or substituted by hydroxyl, lower alkoxy or carboxyl; a radical of the formula $-O(-CH_2-CH_2-O)_t-R_6$, in which t is 2-5 and R_6 is hydrogen or lower alkyl; carboxyl;

lower alkoxycarbonyl; piperazin-1-yl-carbonyl; carbamoyl; N-lower alkyl-carbamoyl which is unsubstituted in the lower alkyl moiety or substituted by hydroxyl or amino; N,N-di-lower alkyl-carbamoyl; cyano; nitro; amino; lower alkanoylamino; lower alkylamino; N,N-di-lower alkylamino; aminosulfonyl or trifluoromethyl, where, if more than one radical R_1 is present in the molecule, these can be identical or different from one another,

R_2 is hydrogen, carbamoyl or N-lower alkyl-carbamoyl,

m and n are each 0 or 1, where m is 0 if n is 1 and m is 1 if n is 0,

dashed lines represent a single bond which is located between N-7 and C-8 if m is 0 and located between C-8 and N-9 if m is 1,

R_3 is lower alkyl or phenyl which are unsubstituted or in each case substituted by hydroxyl, lower alkoxy, amino, lower alkylamino or N,N-di-lower alkylamino and

a) R_4 is hydrogen, amino, phenylamino, lower alkylamino, hydroxyl, phenoxy, lower alkoxy; an acyl radical of the part formula Z-C(=W)-, in which W is oxygen, sulfur or imino and Z is R^o, R^o-O- or an amino group of the formula $R_7(R_8)N$-, in which R^o in each case is C_1-C_4alkyl, hydroxy-C_2-C_{14}alkyl, cyano-C_1-C_4alkyl, carboxy-C_1-C_4alkyl, C_1-C_4alkoxycarbonyl-C_1-C_4alkyl, C_3-C_7alkenyl or phenyl and R_7 and R_8 independently of one another are each hydrogen, lower alkyl, ω-amino-lower alkyl, lower alkylsulfonyl or phenyl;

an aliphatic hydrocarbon radical having not more than 29 C atoms, which is substituted by halogen, amino, lower alkylamino, ω-amino-lower alkylamino, lower alkanoylamino, benzoylamino, hydroxylamino, hydroxylimino, lower alkoxy-amino, phenyloxyamino, amino-cyclohexyl-amino-, amino-phenyl-amino-, carbamoyl-amino, (N-lower alkyl-carbamoyl)-amino, (N-[ω-amino-lower alkyl]-carbamoyl)-amino, (N-phenyl-carbamoyl)-amino, mercapto, lower alkylthio, thiocarbamoyl, thioureido, N-lower alkyl-thioureido, N-phenyl-thioureido, guanidino, N-lower alkyl-guanidino, carboxyl, lower alkoxycarbonyl,

phenyloxycarbonyl, benzyloxycarbonyl, hydroxylaminocarbonyl, carbamoyl, amidino, cyano, hydroxyl, lower alkoxy, phenyloxy, aminocarbonyl-oxy, oxo, aminosulfonyl, lower alkylsulfonyl-amino, glycylamino, alanylamino, phenylalanylamino, prolylamino, valylamino, leucylamino, isoleucylamino, serylamino, threonylamino, cysteinylamino, methionylamino, tyrosylamino, tryptophanylamino, arginylamino, histidylamino, lysylamino, glutamylamino, glutaminylamino, asparagylamino, asparaginylamino or phenylglycylamino; benzyl; 2-phenyl-ethyl; 3-aminomethyl-benzyl; (1-hydroxy-cyclohex-1-yl)-methyl; (2-amino-3,5,5-trimethyl-cyclopentyl)-methyl; 1-[N-(1-carboxy-2-phenyl-ethyl)-carbamoyl]-2-carbamoyl-eth-1-yl; 1-carbamoyl-1-phenyl-methyl; 1-carbamoyl-2-(4-hydroxy-phenyl)-eth-1-yl; 1-carbamoyl-2-phenyl-eth-1-yl; 2-amino-1,2-diphenyl-eth-1-yl; 2-benzyloxycarbonyl-1-carbamoyl-eth-1-yl; 3-benzyloxycarbonyl-1-carbamoyl-prop-1-yl; 1-adamantyl-2-amino-prop-1-yl; 1-adamantyl-1-amino-prop-2-yl; (2-furyl)-methyl; (2-tetrahydrofuryl)-methyl; 2-pyrid-2-yl-ethyl; 2-piperidino-ethyl; 2-(morpholin-4-yl)-ethyl; 2-(3-indolyl)-ethyl; 2-(4-imidazolyl)-ethyl; 1-carbamoyl-2-(β-indolyl)-eth-1-yl; 1-carbamoyl-2-imidazol-4-yl-eth-1-yl; 1-carbamoyl-2-indol-3-yl-eth-1-yl; 3-aminomethyl-oxetan-3-yl-methyl; 1-(acetoxy-imino)-1-(4-amino-2-oxa-1,3-diazol-5-yl)-methyl; 2-amino-cyclohex-1-yl; 3-amino-cyclohex-1-yl; 2-aminomethyl-3,3,5-trimethyl-cyclopent-1-yl; 3-amino-adamantan-1-yl; 2-carbamoyl-bicyclo[2.2.1]hept-5-en-3-yl; 2-carbamoyl-cyclohex-1-yl; 9-amino-spiro[4.4]non-1-yl; 5-amino-2-oxa-1,3-diazol-4-yl; 4-amino-thien-3-yl; 3-carbamoyl-5-(3-[2,4-dichloro-phenyl]-1-oxo-prop-2-en-1-yl)-1,2-thiazol-4-yl; 3-carbamoyl-5-(3-[4-trifluoro-phenyl]-1-oxo-prop-2-en-1-yl)-1,2-thiazol-4-yl; 4-amino-2-(4-carboxy-butyl)-tetrahydrothiophen-3-yl; 3-amino-2-(4-carboxy-butyl)-tetrahydrothiophen-4-yl; [1,2,5]oxadiazolo[3,4-b](6-amino-pyrazin-5-yl); 2,5'-diacetyl-3-amino-thieno[2,3-b]thiophen-4'-yl or 3-amino-2,5'-dipivaloyl-thieno[2,3-b]thiophen-4'-yl, and

R_5 independently of R_4, is as defined above for R_4, with the exception of hydrogen and an aliphatic hydrocarbon radical having not more than 29C atoms, which is substituted by hydroxyl, or

b) R_4 and R_5 together are 1,2-ethylene, propane-1,3-diyl, butane-1,4-diyl, pentane-1,5-diyl, 3-(3-amino-propionyl)-3-aza-pentane-1,5-diyl, 1-aminomethyl-butane-1,4-diyl, 1-hydroxy-methyl-butane-1,4-diyl, 3-(2-amino-ethyl)-pentane-1,5-diyl, 3-aza-pentane-1,5-diyl or 3-(2-amino-ethyl)-3-aza-pentane-1,5-diyl,

or a salt thereof.

Claim 21. A compound of the formula I according to Claim 20, in which

q is 1-3 and

R_4 is hydrogen,

or a salt thereof.

Claim 22. A compound of the formula I according to claim 20, in which

q is 1,

R_1 is chlorine which is in the 3 position,

R_2 is hydrogen,

m is 0 and

n is 1,

R_3 is ethyl and

a) R_4 is hydrogen, and

R_5 is amino; phenylamino; lower alkylamino; hydroxyl; phenoxy; loweralkoxy; an acyl radical of the part formula Z-C(=W)-, in which W is oxygen, sulfur or imino and Z is R^o, R^o-

O- or an amino group of the formula $R_7(R_8)N$-, in which R^o in each case is C_1-C_4alkyl, hydroxylC_2-C_{14}alkyl, cyano-C_1-C_4alkyl, carboxy-C_1-C_4alkyl, C_1-C_4alkoxycarbonyl-C_1-C_4alkyl, C_3-C_7alkenyl or phenyl and R_7 and R_8 independently of one another are each hydrogen, lower alkyl, ω-amino-lower alkyl, lower alkylsulfonyl or phenyl;

2-carbamoyl-1-carboxy-eth-1-yl, 3-amino-2-hydroxy-prop-1-yl, 3-amino-prop-1-yl, 3-amino-2,2-dimethyl-prop-1-yl, 3-amino-2-oxo-prop-1-yl, 3-amino-1-carboxy-prop-1-yl, 3-amino-3-carboxy-prop-1-yl, 1,1-dicarbamoyl-methyl, 2-carbamoyl-eth-1-yl, 3-amino-1,3-di-hydroxyl-imino-prop-1-yl, 2-carbamoyl-1-hydroxylimino-eth-1-yl, 1-hydroxylimino-2-thiocarbamoyl-eth-1-yl, 3-amino-3-hydroxylimino-1-thio-prop-1-yl, 3-amino-pent-1-yl,1-amino-pent-3-yl,1-amidino-1-carbamoyl-methyl, 4-amino-1,1,1,3,5,5,5-heptafluoro-pent-2-yl, 3-amino-1,3-dicarboxy-prop-1-yl, 2-carbamoyl-1-ethoxycarbonyl-eth-1-yl, 2-amino-1,2-dithio-eth-1-yl, 2-amino-1,2-dioxo-eth-1-yl, 2-amino-2-methyl-prop-1-yl, 1-amino-2-methyl-prop-2-yl, 2-amino-prop-1-yl, 1-amino-prop-2-yl, 2-amino-eth-1-yl, 2-amino-2-carboxy-eth-1-yl, 2-amino-1-carboxy-eth-1-yl, carbamoyl-methyl, 1-carbamoyl-3-methyl-but-1-yl, 2-amino-1,2-dicarboxy-eth-1-yl, 1-carbamoyl-3-methylthio-prop-1-yl, 1-carbamoyl-2-methyl-prop-1-yl,1-carbamoyl-eth-1-yl, 1-carbamoyl-1-cyano-methyl, 1-carbamoyl-3-carboxy-3-fluoro-prop-1-yl, 1-carbamoyl-2-carboxy-eth-1-yl, 2-amino-4-carboxy-but-1-yl, 1-amino-4-carboxy-but-2-yl, 1-carbamoyl-4-guanidino-but-1-yl, 1-carbamoyl-5-amino-pent-1-yl, 1-carbamoyl-2-hydroxy-prop-1-yl, 1-carbamoyl-2-methyl-but-1-yl, 1-carbamoyl-2-hydroxy-eth-1-yl, 1,3-dicarbamoyl-prop-1-yl, 2-amino-but-1-yl, 1-amino-but-2-yl, 1-carbamoyl-pent-1-yl, 1-carbamoyl-but-1-y, benzyl, 2-phenyl-ethyl, 3-aminomentyl-benzyl, (1-hydroxy-cyclohex-1-yl-methyl, (2-amino-3,5,5-trimethyl-cyclopentyl)-methyl, 1-[N-(1-carboxy-2-phenyl-ethyl)-carbamoyl]-2-carbamoyl-eth-1-yl, 1-carbamoyl-1-phenyl-methyl, 1-carbamoyl-2-(4-hydroxy-phenyl)-eth-1-yl, 1-carbamoyl-2-phenyl-eth-1-yl, 2-amino-1,2-diphenyl-eth-1-yl, 2-

benzyloxycarbonyl-1-carbamoyl-eth-1-yl, 3-benzyloxycarbonyl-1-carbamoyl-prop-1-yl, 1-adamantyl-2-amino-prop-1-yl, 1-adamantyl-1-amino-prop-2-yl, (2-furyl)-methyl, (2-tetrahydrofuryl)-methyl, 2-pyrid-2-yl-ethyl, 2-piperidino-ethyl, 2-(morpholin-4-yl)-ethyl, 2-(3-indolyl)-ethyl, 2-(4-imidazolyl)-ethyl, 1-carbamoyl-2-(β-indolyl)-eth-1-yl, 1-carbamoyl-2-imidazol-4-yl-eth-1-yl, 1-carbamoyl-2-indol-3-yl-eth-1-yl, 3-aminomethyl-oxetan-3-yl-methyl, 1-(acetoxy-imino)-1-(4-amino-2-oxa-1,3-diazol-5-yl)-methyl, 2-amino-cyclohex-1-yl, 3-amino-cyclohex-1-yl, 2-aminomethyl-3,3,5-trimethyl-cyclopent-1-yl, 3-amino-adamantan-1-yl, 2-carbamoyl-bicyclo[2.2.1]hept-5-en-3-yl, 2-carbamoyl-cyclohex-1-yl, 9-amino-spiro-[4.4]non-1-yl, 5-amino-2-oxa-1,3-diazol-4-yl, 4-amino-thien-3-yl, 3-carbamoyl-5-(3-[2,4-dichloro-phenyl]-1-oxo-prop-2-en-1-yl)-1,2-thiazol-4-yl, 3-carbamoyl-5-(3-[4-trifluoro-phenyl]-1-oxo-prop-2-en-1-yl)-1,2-thiazol-4-yl, 4-amino-2-(4-carboxy-butyl)-tetrahydrothiophen-3-yl, 3-amino-2-(4-carboxy-butyl)-tetrahydrothiophen-4-yl, [1,2,5]oxadiazolo[3,4-b](6-amino-pyrazin-5-yl), 2,5'-diacetyl-3-amino-thieno[2,3-b]thiophen-4'-yl or 3-amino-2,5'-dipivaloyl-thieno[2,3-b]thiophen-4'-yl, or

b) R_4 and R_5 together are 1,2-ethylene, propane-1,3-diyl, butane-1,4-diyl, pentane-1,5-diyl, 3-(3-amino-propionyl)-3-aza-pentane-1,5-diyl, 1-aminomethyl-butane-1,4-diyl, 1-hydroxy-methyl-butane-1,4-diyl, 3-(2-amino-ethyl)-pentane-1,5-diyl, 3-aza-pentane-1,5-diyl or 3-(2-amino-ethyl)-3-aza-pentane-1,5-diyl,

or a salt thereof.

Claim 23. A compound of the formula I according to claim 20, in which

q is 1-3,

R_1 is halogen; lower alkyl; lower alkoxy; N-lower alkyl-carbamoyl which is substituted in the lower alkyl moiety by hydroxyl; or trifluoromethyl, where, if more than one radical R_1 is present in the molecule, these can be identical or different from one another,

R_2 is hydrogen,

m and n are each 0 or 1, where m is 0 if n is 1 and m is 1 if n is 0,

dashed lines represent a single bond which is located between N-7 and C-8 if m is 0 and located between C-8 and N-9 if m is 1,

R_3 is lower alkyl which is unsubstituted or substituted by hydroxyl and

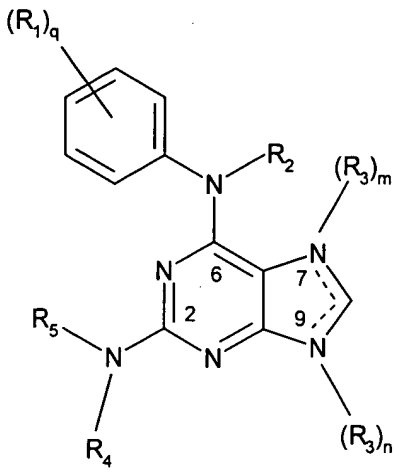
a) R_4 is hydrogen or hydroxy-lower alkyl and

R_5 is 2-amino-cyclohexyl; or lower alkyl which is substituted by amino, lower alkylamino, ω-amino-lower alkylamino, lower alkoxy, phenyl, 3-aminomethyl-phenyl, 2-furyl, 2-tetrahydrofuryl, 2-pyridyl, piperidino, morpholin-4-yl, 3-indolyl, mercapto, 1-hydroxy-cyclohex-1-yl or by 4-imidazolyl; or

b) R_4 and R_5 together are an alkylene radical which has not more than 10 C atoms and is unsubstituted or substituted by hydroxyl or amino, and in which 1 C atom can be replaced by nitrogen,

or a pharmaceutically acceptable salt thereof.

Claim 24. A process for the preparation of a compound of the formula I



(I)

in which q is 1-5,

R_1 is halogen, lower alkyl, hydroxyl or lower alkanoyloxy; lower alkoxy which is unsubstituted or substituted by hydroxyl, lower alkoxy or carboxyl; a radical of the formula $-O(-CH_2-CH_2-O)_t-R_6$, in which t is 2-5 and R_6 is hydrogen or lower alkyl; carboxyl, lower alkoxycarbonyl, piperazin-1-yl-carbonyl or carbamoyl; N-lower alkyl-carbamoyl which is unsubstituted in the lower alkyl moiety or substituted by hydroxyl or amino; N,N-di lower alkyl-carbamoyl, cyano, nitro, amino, lower alkanoylamino, lower alkylamino, N,N-di-lower alkylamino, aminosulfonyl or trifluoromethyl, where, if several radicals R_1 are present in the molecule, these can be identical or different,

R_2 is hydrogen, carbamoyl or N-lower alkyl-carbamoyl,

m and n are each 0 or 1, where m is 0 if n is 1 and m is 1 if n is 0,

R_3 is lower alkyl or phenyl which are unsubstituted or in each case substituted by hydroxyl, lower alkoxy, amino, lower alkylamino or N,N-di-lower alkylamino and

a) R_4 is hydrogen, amino, phenylamino, lower alkylamino, hydroxyl, phenoxy, lower alkoxy, acyl having 1-30 C atoms, a substituted aliphatic hydrocarbon radical having not more than

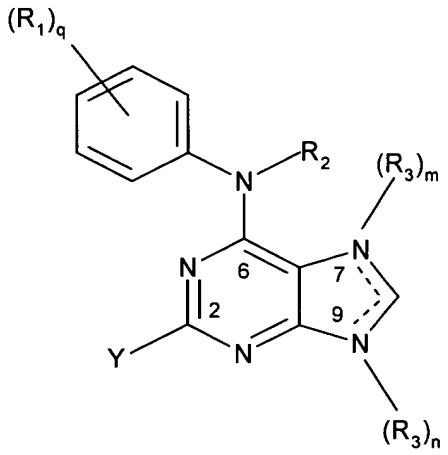
29 C atoms, a carbocyclic radical having not more than 29 C atoms or a heterocyclic radical having not more than 20 C atoms and not more than 9 heteroatoms and

R_5 is amino, phenylamino, lower alkylamino, hydroxyl, phenoxy, lower alkoxy, acyl having 2-30 C atoms, a substituted aliphatic hydrocarbon radical having not more than 29 C atoms, a carbocyclic radical having not more than 29 C atoms or a heterocyclic radical having not more than 20 C atoms and not more than 9 heteroatoms, or

b) R_4 and R_5 together are a substituted or unsubstituted alkylene or alkenylene radical having in each case not more than 15 C atoms, in which 1-3 C atoms can be replaced by oxygen, sulfur or nitrogen,

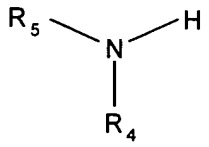
R_1, R_2, m, n, R_3, R_4 and R_5 are as defined in Claim 20, which comprises

a) reacting a compound of the formula II



(II)

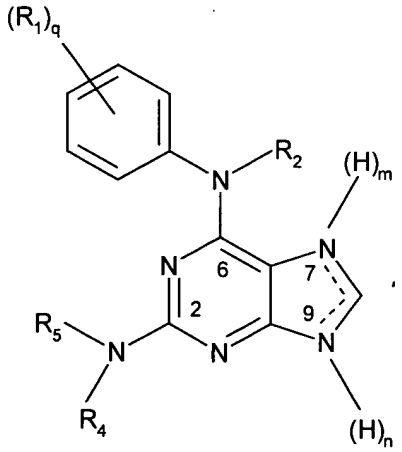
in which Y is a suitable leaving group and the other substituents and symbols are as defined above for compounds of the formula I, free functional groups present therein, if necessary, being protected by easily detachable protective groups, with an amine of the formula III



(III)

in which the substituents are as defined above for compounds of the formula I, free functional groups present therein, if necessary, being protected by easily detachable protective groups and detaching the protective groups present, or

b) reacting a compound of the formula V



(V)

in which the substituents and symbols are as defined above for compounds of the formula I, free functional groups present therein, if necessary, being protected by easily detachable protective groups,

with a compound of the formula VI

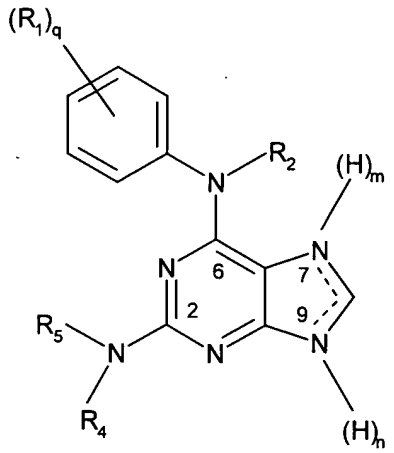
R_3-Y (VI)

in which Y is a suitable leaving group and

R_3 is as defined above for compounds of the formula I, free functional groups present in R_3, if necessary, being protected by easily detachable protective groups, and detaching the protective groups present,

and, after carrying out process a) or b), if necessary for the preparation of a salt, converting a resulting free compound of the formula I into a salt or, if necessary for the preparation of a free compound, converting a resulting salt of a compound of the formula I into the free compound.

Claim 25. A compound of the formula V



(V)

in which q is 1 to 5,

R_1 is halogen; lower alkyl; hydroxyl; lower alkanoyloxy; lower alkoxy which is unsubstituted or substituted by hydroxyl, lower alkoxy or carboxyl; a radical of the formula -O(-CH_2-CH_2-

$O)_t$-R_6, in which t is 2-5 and R_6 is hydrogen or lower alkyl; carboxyl; lower alkoxycarbonyl; piperazin-1-yl-carbonyl; carbamoyl; N-lower alkyl-carbamoyl which is unsubstituted in the lower alkyl moiety or substituted by hydroxyl or amino; N,N-di-lower alkyl-carbamoyl; cyano; nitro; amino; lower alkanoylamino; lower alkylamino; N,N-di-lower alkylamino; aminosulfonyl or trifluoromethyl, where, if more than one radical R_1 is present in the molecule, these can be identical or different from one another,

R_2 is hydrogen, carbamoyl or N-lower alkyl-carbamoyl,

m and n are each 0 or 1, where m is 0 if n is 1 and m is 1 if n is 0,

dashed lines represent a single bond which is located between N-7 and C-8 if m is 0 and located between C-8 and N-9 if m is 1, and

a) R_4 is hydrogen; amino; phenylamino; lower alkylamino; hydroxyl; phenoxy; lower alkoxy; an acyl radical of the part formula Z-C(=W)-, in which W is oxygen, sulfur or imino and Z is R^o, R^o-O- or an amino group of the formula $R_7(R_8)N$-, in which R^o in each case is C_1-C_4alkyl, hydroxy-C_2-C_{14}alkyl, cyano-C_1-C_4alkyl, carboxy-C_1-C_4alkyl, C_1-C_4alkoxycarbonyl-C_1-C_4alkyl, C_3-C_7alkenyl or phenyl and R_7 and R_8 independently of one another are each hydrogen, lower alkyl, ω-amino-lower alkyl, lower alkylsulfonyl or phenyl;

an aliphatic hydrocarbon radical having not more than 29 C atoms, which is substituted by halogen, amino, lower alkylamino, ω-amino-lower alkylamino, lower alkanoylamino, benzoylamino, hydroxylamino, hydroxylimino, lower alkoxy-amino, phenyloxyamino, amino-cyclohexyl-amino-, amino-phenyl-amino-, carbamoyl-amino, (N-lower alkyl-carbamoyl)-amino, (N-[ω-amino-lower alkyl]-carbamoyl)-amino, (N-phenyl-carbamoyl)-amino, mercapto, lower alkylthio, thiocarbamoyl, thioureido, N-lower alkyl-thioureido, N-phenyl-thioureido, guanidino, N-lower alkyl-guanidino, carboxyl, lower alkoxycarbonyl, phenyloxycarbonyl, benzyloxycarbonyl, hydroxylaminocarbonyl, carbamoyl, amidino,

cyano, hydroxyl, lower alkoxy, phenyloxy, aminocarbonyl-oxy, oxo, aminosulfonyl, lower alkysulfonyl-amino, glycylamino, alanyl-amino, phenylalanylamino, prolylamino, valylamino, leucylamino, isoleucylamino, serylamino, threonylamino, cysteinylamino, methionylamino, tyrosylamino, tryptophanylamino, arginylamino, histidylamino, lysylamino, glutamylamino, glutaminylamino, asparagylamino, asparaginylamino or phenylglycylamino;

benzyl; 2-phenyl-ethyl; 3-aminomethyl-benzyl; (1-hydroxy-cyclohex-1-yl)-methyl; (2-amino-3,5,5-trimethyl-cyclopentyl)-methyl; 1-[N-(1-carboxy-2-phenyl-ethyl)-carbamoyl]-2-carbamoyl-eth-1-yl; 1-carbamoyl-1-phenyl-methyl; 1-carbamoyl-2-(4-hydroxyl-phenyl)-eth-1-yl; 1-carbamoyl-2-phenyl-eth-1-yl; 2-amino-1,2-diphenyl-eth-1-yl; 2-benzyloxycarbonyl-1-carbamoyl-eth-1-yl; 3-benzyloxycarbonyl-1-carbamoyl-prop-1-yl; 1-adamantyl-2-amino-prop-1-yl; 1-adamantyl-1-amino-prop-2-yl; (2-furyl)-methyl; (2-tetrahydrofuryl)-methyl; 2-pyrid-2-yl-ethyl; 2-piperidino-ethyl;

2-(morpholin-4-yl)-ethyl; 2-(3-indolyl)-ethyl; 2-(4-imidazolyl)-ethyl; 1-carbamoyl-2-(β-indolyl)-eth-1-yl; 1-carbamoyl-2-imidazol-4-yl-eth-1-yl; 1-carbamoyl-2-indol-3-yl-eth-1-yl; 3-amino-methyl-oxetan-3-yl-methyl; 1-(acetoxy-imino)-1-(4-amino-2-oxa-1,3-diazol-5-yl)-methyl; 2-amino-cyclohex-1-yl; 3-amino-cyclohex-1-yl; 2-aminomethyl-3,3,5-tirmethyl-cyclopent-1-yl; 3-amino-adamantan-1-yl; 2-carbamoyl-bicyclo[2.2.1]hept-5-en-3-yl; 2-carbamoyl-cyclohex-1-yl; 9-amino-spiro[4.4]non-1-yl;

5-amino-2-oxa-1,3-diazol-4-yl; 4-amino-thien-3-yl; 3-carbamoyl-5-(3-[2,4-dichloro-phenyl]-1-oxo-prop-2-en-1-yl)-1,2-thiazol-4-yl; 3-carbamoyl-5-(3,-[4-trifluoro-phenyl]-1-oxo-prop-2-en-1-yl)-1,2-thiazol-4-yl; 4-amino-2-(4-carboxy-butyl)-tetrahydrothiophen-3-yl; 3-amino-2-(4-carboxy-butyl)-tetrahydrothiophen-4-yl; [1,2,5]oxadiazolo[3,4-b](6-amino-pyrazin-5-yl); 2,5'-diacetyl-3-amino-thieno[2,3-b]thiophen-4'-yl or 3-amino-2,5'-dipivaloyl-thieno[2,3-b]thiophen-4'-yl, and

R_5, independently of R_4, is as defined above for R_4, with the exception of hydrogen and an aliphatic hydrocarbon radical having not more than 29 C atoms, which is substituted by hydroxyl, or

b) R_4 and R_5 together are 1,2-ethylene, propane-1,3-diyl, butane-1,4-diyl, pentane-1,5-diyl, 3-(3-amino-propionyl)-3-aza-pentane-1,5-diyl, 1-aminomethyl-butane-1,4-diyl, 1-hydroxy-methyl-butane-1,4-diyl, 3-(2-amino-ethyl)-pentane-1,5-diyl, 3-aza-pentane-1,5-diyl or 3-(2-amino-ethyl)-3-aza-pentane-1,5-diyl, it being possible for free functional groups present therein to be protected by easily detachable protective groups.

Claim 26. A compound of the formula I according to claim 20 selected from the group consisting of

6-(4-benzyloxycarbonylamino-phenyl-amino)-9-ethyl-2-(2-hydroxy-ethyl-amino)-*9H*-purine,

6-(4-fluoro-phenyl-amino)-9-ethyl-2-(*trans*-4-hydroxy-cyclohexyl-amino)-*9H*-purine,

9-ethyl-2-(*trans*-4-hydroxy-cyclohexyl-amino)-6-(4-trifluoromethyl-phenyl-amino)-*9H*-purine,

2-(*trans*-4-amino-cyclohexyl-amino)-9-ethyl-6-(4-trifluoromethyl-phenyl-amino)-*9H*-purine,

6-(3-fluoro-phenyl-amino)-9-ethyl-2-(*trans*-4-hydroxy-cyclohexyl-amino)-*9H*-purine,

6-(3-cyano-phenyl-amino)-9-ethyl-2-(*trans*-4-hydroxy-cyclohexyl-amino)-*9H*-purine,

2-(*cis*-3-amino-cyclohexyl-amino)-6-(3-chloro-phenyl-amino)-9-ethyl-*9H*-purine, and

6-(4-fluoro-phenyl-amino)-2-(2-hydroxy-ethyl-amino)-9-isopropyl-*9H*-purine

or a pharmaceutically acceptable salt of such a compound.

Claim 27. A pharmaceutical composition comprising a pharmaceutically acceptable carrier or diluent and a therapeutically effective amount of a compound of the formula I according to claim 20, or a pharmaceutically acceptable salt thereof.